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Amendments to Claims

Claim 1 (Original). A method for the production of a monoterpenes comprising:

- a) providing a transformed C1 metabolizing host cell comprising:
 - (i) suitable levels of geranyl pyrophosphate; and
 - (ii) at least one isolated nucleic acid molecule encoding a cyclic terpene synthase under the control of suitable regulatory sequences;
- (b) contacting the host cell of step (a) under suitable growth conditions with an effective amount of a C1 carbon substrate whereby a monoterpenes compound is produced.

Claim 2 (Original). A method according to Claim 1 wherein the C1 carbon substrate is selected from the group consisting of methane, methanol, formaldehyde, formic acid, methylated amines, methylated thiols, and carbon dioxide.

Claim 3 (Original). A method according to Claim 1 wherein the C1 metabolizing host cell is a methylotroph selected from the group consisting of *Methylomonas*, *Methylobacter*, *Methylococcus*, *Methylosinus*, *Methylocyctis*, *Methylomicrobium*, *Methanomonas*, *Methylophilus*, *Methylobacillus*, *Methylobacterium*, *Hyphomicrobium*, *Xanthobacter*, *Bacillus*, *Paracoccus*, *Nocardia*, *Arthrobacter*, *Rhodopseudomonas*, *Pseudomonas*, *Candida*, *Hansenula*, *Pichia*, *Torulopsis*, and *Rhodotorula*.

Claim 4 (Original). A method according to Claim 1 wherein C1 metabolizing host is a methanotroph.

Claims 5-6 (Canceled).

Claim 7 (Currently Amended). A method according to Claim 4 wherein the obligate-methanotroph is a high growth methanotrophic strain which comprises a functional Embden-Meyerhof carbon pathway, said pathway comprising a gene encoding a pyrophosphate dependent phosphofructokinase enzyme.

Claim 8 (Canceled).

Claim 9 (Original). A method according to Claim 7 wherein the high growth methanotrophic bacterial strain optionally contains a functional Entner-Douderoff carbon pathway.

Claim 10 (Canceled)

Claim 11 (Currently Amended). A method according to Claim 4-7 wherein the high growth methanotrophic bacterial strain is *methylomonas* 16a having the ATCC designation ATCC PTA 2402.

Claim 12 (Original). A method according to Claim 1 wherein the cyclic terpene synthase is selected from the group consisting of limonene synthase, pinene synthase, bornyl synthase, phellandrene synthase, cineole synthase, and sabinene synthase.

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Claim 13 (Original). A method according to Claim 1 wherein the monoterpene is selected from the group consisting of limonene, pinene, bornyl diphosphate, β -phellandrene, 1,8-cineole, and sabinene.

Claim 14 (Original). A method according to Claim 1 wherein the cyclic terpene synthase is limonene synthase, the monoterpene is limonene and the recombinant host is *Methylomonas*.

Claim 15 (Original). A method according to Claim 14 wherein the limonene synthase has the amino sequence as set forth in SEQ ID NO:6.

Claim 16-21 (Canceled).

Claim 22 (Original). A method according to Claim 1 wherein the suitable levels of geranyl pyrophosphate are provided by the expression heterologous upper pathway isoprenoid pathway genes.

Claim 23 (Original). A method according to Claim 22 wherein said upper pathway isoprenoid genes encode enzymes selected from the group consisting of D-1-deoxyxylulose-5-phosphate synthase (DXS); D-1-deoxyxylulose-5-phosphate reductoisomerase (DXR); 2C-methyl-d-erythritol cytidyltransferase (IspD), 4-diphosphocytidyl-2-C-methylerythritol kinase (IspE), 2C-methyl-d-erythritol 2,4-cyclodiphosphate synthase (IspF), CTP synthase (IspA) and Geranyltranstransferase (PyrG).